

Review Article

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The Tesco Group and Sustainable Operations Management

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ABSTRACT

This paper described and discussed sustainability and sustainable operations management using the Tesco Group of the United Kingdom as the case study. It talked about the relevance of sustainability to businesses and dimensions and practices of environmental, social and economic sustainability. It also looked at the various relevant drivers of sustainability (both internal and external) as well as the barriers or challenges to businesses on sustainability. The paper also discussed the performance measurements and reporting of sustainability as well as how sustainability is practised by the Tesco Group. It concluded with the observation that the Tesco Group has become a role model in sustainability in the food sector and is leading the way for other companies to follow suit.

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Introduction

According to Nutburn “to achieve a sustainable supply chain, a company has to address environmental, social and economic concerns across its entire supply chain” [1]. In other words, when a company reduces its environmental footprints and wastes and ensures the safety and well-being of its employees in its supply chain, whilst seeking to optimize its economic benefits, that business is described as practising sustainable operations management. The Tesco Group meets all the afore-mentioned qualities and is my chosen business for this paper. Tesco is a grocery, clothing, financial and telecommunications services retailing giant headquartered in the United Kingdom. It has a total workforce of 345,000 [2]. It sells various grocery products, including food and clothing. As a result of adhering to sound sustainability and social principles, Tesco has reaped enormous benefits from its sustainable supply chains.

Relevance of Sustainability to Businesses

Sustainability can be defined as the initiation of environmentally and socially friendly practices, whilst seeking to optimize economic benefits that do not harm the environment and society. As a result of the benefits of sustainability to business enterprises, it is increasingly being seen as the future of businesses. In other words, businesses that do not practice sustainability may fail to prosper and would be left out by their counterparts that adhere to the tenets of sustainability. It is pertinent to point out that sustainability affects every facet of business enterprises.

A recent report of the United Nations gave a grim picture about the world facing resource-depletion [3]. For example, it has been found that many communities would not have access to clean drinking water in a few years to come, if concrete measures are not put in place. The practice of sustainability, as is being done by Tesco, can help reverse this trend of resource depletion.

Indeed, sustainability is relevant to businesses because it helps to preserve the resource base of the world [4]. Recognizing this negative trend coupled with the emission of greenhouses gases such as methane, carbon dioxide and nitrous oxide as well as other pollutants, national governments and in some cases, industry stakeholders are enacting stringent legislations to preserve their resource base and also curb the emission of greenhouse gases that cause climate change. In this regard, businesses are compelled to make their operations compliant to these laws. Businesses such as Tesco that abide by sustainability laws are allowed to continue with their business, whilst those which fail to do so would be made to face punitive measures from national governments and industry-stakeholders.

Sustainability is relevant to businesses such as Tesco because it makes businesses more efficient and reduce waste in the system. By making businesses more efficient, business enterprises can reduce their cost of production and make more profit. The reduced cost of production can also be passed on to customers in lower prices. have established that sustainability engagements in the small businesses supply chain could lead to increased future company value [5]. Business enterprises such as Tesco that adopt sustainability practices and report regularly on them enhance their reputation. In the same vein, businesses that do not take heed to sustainability principles may receive negative press reporting, including possible boycott of their products and services. For example, BP, Johnson & Johnson and Toyota have in the past received damaging press reporting because of their laxity in adhering to sustainability practices and the cost to them have been enormous [6]. On the other hand, businesses such as Tesco, Ford and Intel have received much praise for their sustainability practices, which have enhanced their reputation and brand value. In some markets, such as the big retailing sector in the United Kingdom, abiding by sustainability laws have become a key tool in entering such markets [2,7]. A company without these requirements cannot simply enter this market and prosper in it. Indeed, in such markets, a company's sustainability practices have become the

differentiating weapon they use to gain greater market share and Tesco is a perfect example of this [8].

A business entity's positive sustainability practices can help it attract the needed talent from the labour market. Job seekers are always looking for reputable organizations such as Tesco to join and the practice of sustainability can make an organization reputable. The practice and reporting on sustainability by businesses such as Tesco increase their transparency, creditability and accountability to the general public [9]. Such an undertaking therefore helps to attract more customers to the business enterprise. Sustainability is also relevant to businesses because there is a segment of investors, who would only invest in companies that practice sustainability [10]. To this end, a business that abides by sustainability principles stand a good chance of attracting investable funds from such investors. They can then use such funds to develop and grow their businesses.

According to Arcolab businesses are increasingly coming under the spotlight for the impact their operations have on the communities they work in. Those who pursue sustainability such as Tesco are perceived favourably in such communities, whilst those that do not are disfavouredly considered [11]. By adhering to sustainability practices, businesses contribute to a better health for their employees, the natural environment and society in general. This is because the possible carbon footprint of the business is reduced and also its contribution to the pollution of air, water and soil is minimized.

It is evident from this discourse that sustainability is relevant to businesses. As such, every effort should be made to make businesses sustainability-compliant.

Dimensions and Practices of Environment, Social and Economic Sustainability

According to sustainability in terms of business is to practice business without any adverse effects on the environment, society or culture and the economy as a whole. Sustainability is therefore anchored on three main pillars, namely the environment, economy and society [12]. Environmental sustainability looks at greenhouse gas emissions and their effect on the natural environment, where a company does its business. It requires the measurement of greenhouse gas emissions such as carbon dioxide, methane and nitrous oxide, which cause climate change. It also looks at the percentage reduction in carbon dioxide and the percentage carbon dioxide emission per tonne of products produced. In addition, the company measures its total energy and water consumption and attempts to reduce them as practically as possible. The company must also investigate how much of the water it uses can be recycled or reused. Finally, it must investigate its product wastes and see how they can be recycled and or reduced. It must also measure its material consumption and scrap rates and assess each product's life cycle and determine how fast the product can be recycled to cut down cost. Tesco does well in all these measures.

The social dimension of sustainability looks at the company's social responsibility to the communities in which it does its business, including its suppliers, the health and safety of its employees as well as the welfare of its employees. Tesco is a champion in these areas as well. The economic dimension of sustainability considers the quality and reliability of its supply and the delivery rate, the efficiency of its inventory and the responsiveness to demand, order flexibility and order fulfilment. Tesco addresses all these concerns via an environment policy and other measures it has initiated and implementing.

The Relevance of Different Drivers of Sustainability Practices

Many research workers have studied and reported on the drivers of sustainability in supply chain practices [13,14]. proceeded further to categorize the drivers into internal and external ones. For the internal drivers, they identified corporate strategy, the organization's culture, the organization's resources and the organization's characteristics as the driving forces behind sustainability. Whereas, for external drivers, they listed exogenous pressures coming from regulations, society and the market as responsible for sustainability in supply chains. The drivers identified are discussed below for their relevance to sustainability practices.

Internal Drivers of Sustainability Practices

Corporate strategy is a relevant driver of sustainability in the supply chain because it determines where investable funds of the company would be put. Through its corporate strategy, an organization can decide to focus on a single industry or pursue vertical integration, which can either be forward or backward or diversification or expand its business internationally [15]. A company can also adopt sustainability as a strategy to attract more customers and increase its market share as Tesco is currently doing. The strategy a company adopts, greatly influences its operational performance. Development of corporate strategy is often led by the top management of the company. As such, if they adopt a sustainability-compliant strategy, it would have the support and blessing of the top management and they would provide funding for them as well.

An organization's culture is the embodiment of its beliefs, norms, values and expectations and it determines how people behave and gets work done [15]. Some organizational culture in some countries favours sustainability whilst others frown upon it as a waste of time and money. As such, it is much easier to introduce and implement sustainability practices in organizational cultures such as Tesco that subscribe to sustainability than in those that reject it.

Organization's resources are a driver to sustainability in supply chain because it takes financial, human, capital and technological resources to successfully implement sustainability programmes. Companies with well-endowed resources can better develop and implement sustainability programmes than their counterparts without them.

According to organizational characteristics such as its size, geographical location, degree of internationalization and the current level of environmental actions are drivers to sustainability. It has been established that some small and medium-sized companies have financing constraints in adopting sustainability practices in their supply chain, whereas larger companies do not have such challenges. Companies with international business entities are often compelled by the countries they do business in to comply with sustainability regulations and laws. Companies that have business interests in the European Union face stringent green regulations that those in the United States of America.

External Drivers of Sustainability Practices

reported that regulatory and market pressures are the most important drivers of sustainable supply chain management (SSCM) in the implementation of sustainability practices. Regulatory pressures come from government legislation, regional and international regulators, professional or trade associations, and certifications in the form of incentives, guidelines and laws on sustainability [13]. Market pressures include pressures from

competitors, customers, suppliers, shareholders and investors and the quest to gain competitive advantage or manage a company's reputation or image. Societal pressure is yet another external driver to sustainability and it includes pressures from the media or press, Non-governmental organizations, consumers, organizations, networks, communities and the general public.

Barriers or Challenges to Businesses on Sustainability

In a bid to adopt sustainability practices in businesses, various barriers or challenges are encountered. These barriers can emanate internally from within the business enterprise and also from external sources.

Internal Barriers or Challenges to Businesses on Sustainability

Catalogued internal barriers to sustainability as cost, lack of knowledge and lack of training. Adoption or integration of sustainability into a business enterprise may increase cost, which needs to be passed on to the ultimate customer [16]. If competing businesses have a lower cost to their production, then, it becomes disincentive for the business enterprise in question to adopt sustainability. As such, internally, the business enterprise can use cost as a barrier to adopting sustainability. Also, it takes specific and in some cases specialized knowledge to integrate sustainability into one's business. Where such knowledge is lacking in a business enterprise, it may grind the sustainability programme to a halt until a knowledgeable staff is hired into the company. In the same vein, staff in the business enterprise need to be trained in sustainability and often such training programme may not be available or the business enterprise cannot afford it. In situations such as these, the business enterprise may not be able to initiate and implement sustainability in the company.

Also reported that organizational, systemic and internal resistances are some of the key barriers faced by businesses in adopting sustainability [17]. In any company, where these resistances are prevalent, especially from the top management, it can hinder the adoption of sustainability practices.

External Barriers or Challenges to Businesses on Sustainability

According to Dahlmann, Brammer and Millington government regulations, poor supplier commitment and competition uncertainty are some of the external barriers to sustainability [18]. Some national governments may frown upon the idea of sustainability and may use regulatory measures to advance this cause. When this happens, the creativity and innovation of businesses to implement sustainability programmes are stifled. In other cases, suppliers of a business enterprise may choose not to adopt sustainability practices even though the business enterprise in question may put pressure on them to do so. When that happens, the business enterprise's sustainability programme can be seriously hindered. Competition uncertainty can also serve as a barrier to the adoption of sustainability practices. The business enterprise that goes ahead and adopt sustainability benefits from first-mover advantage with regards to positive reputation and enhancement of brand image.

Performance Measurements on and Reporting of Sustainability

Performance measurements and reporting are done on the environment, social and economic principles underpinning the organization. To do this, various organization-specific and or industry-specific measurement tools and best practices are used [19].

For the environment, performance measurements are done on greenhouse gas emissions, natural resources utilization and waste and recycling [20]. In the case of greenhouse gas emissions,

measurements are done on the reduction percentage of carbon dioxide emission compared to the baseline determined before the measurements began. Furthermore, the percentage carbon dioxide emission per tonne produced as well as the total carbon dioxide emission are also measured. The latter is used to calculate the amount of carbon dioxide in the entire supply chain. With regards to natural resources utilization, the total energy consumption by the organization or company is measured. Then, the reduction of energy consumption compared to the baseline is determined. Water consumption is also measured and the amount of water recycled or re-used is also determined. Natural Resources Utilization measures essentially the quality of water, air, energy, land, plants and animals. With respect to waste and recycling, measurements are done on product recycling rate, material consumption rate, scrap rate, product life cycle, waste reduction rate and waste recycling rate. From these assessments, the amount of waste and the quantity of it recycled into new products can be determined and the cost savings made can also be assessed by the company.

For measurements on social principles, three parameters are used, namely employee welfare, health and safety and social responsibility. Under employee welfare, employees need to be trained in the proper handling of hazardous materials as well as the wearing of protective clothing. The number of employees that got injured in the line of duty is also measured as well as the percentage of women who received training in a given year. The latter is assessed against a minimum number of women that needs to be trained in a given year. With regards to health and safety, the number of accidents and the percentage reduction of accidents are determined. Where incidents are high, it will be incumbent on the organization to provide protective clothing and gear for the employees. Another means is to raise the standard of hygiene in the premises of the organization to prevent disease outbreaks.

On economic measures, parameters such as quality, efficiency and responsiveness are used to measure performance. The details are as shown below: -

Quality	Supply quality, supply lead time, supplier reliability, delivery reliability, availability of products, customer satisfaction levels, quality rate and damage-free shipments
Efficiency	Inventory level, average inventory, inventory turnover rate, inventory cost, obsolete inventory, capacity utilization, days to sell inventory and transportation cost.
Responsiveness	Production flexibility, order fulfilment, order fulfilment, response time, lead time, demand forecast accuracy and order flexibility

Source: Adapted from Chardine-Baumann and Botta-Genoulaz [21]

Various sustainability reporting tools exist and they include the ISO 14001, which is a framework that companies can use to measure and report on their environmental management system (EMS) [22]. The Environmental Protection Agencies in various countries of the world promotes the EMS, which helps an organization lower its environmental impacts and enhance its operating efficiency. There is also the corporate sustainable reporting (CSR) tool that companies can use to measure their contributions to the Seventeen sustainable development goals of the United Nations. These goals include (i) No poverty (ii) Zero hunger (iii) Good health and well-being (iv) Quality education (v) Gender equality (vi) Clean water and sanitation (vii) Affordable and clean energy (viii) Decent work

and economic growth (ix) Industry, innovation and infrastructure (x) Reduced inequalities (xi) Sustainable cities and communities, (xii) Responsible consumption and production, including halving food waste by 2030 (xiii) Climate action (xiv) Life below water (xv) Life on land (xvi) Peace, justice and strong institutions, and (xvii) Partnerships for the Goals [23]. The elements of the CSR include sustainability reporting requirement, framework and standard. Also, there is the Global Reporting Initiative (GRI) which is a global best practice for reporting on a range of economic, environmental and social impacts [24]. Furthermore, GRI provides support to companies such as Tesco that measure and report on sustainability. Apart from the general standard, there are sector-specific reporting tools for environment (GRI-300), social (GRI-400) [24]. There is also the Global compact, which has a component that measures and reports on the Rio Declaration on Environment and Development. There are also about fifty sustainability standards and certifications schemes globally. These are third-party assessment and reporting schemes done on the environment, social, ethical and food safety issues using principles such as independent, standard-based, verifiable, voluntary and with little or no governmental regulatory requirements. A notable example of these independent and voluntary certification schemes is the Fairtrade and Klimohai (East Africa). There is also the Carbon Disclosure Project (CDP), which offers the only global system for cities and companies to measure, manage, disclose and share vital environmental information [25]. The CDP currently has over “13,000 companies and 1,100 plus Cities, States and Regions that report through CDP on climate change, water security and forests” [26]. It has the CDP Water, CDP Cities, CDP Supply Chain, and CDP Forests. The CDP Forests is for carbon disclosure in cattle, palm oil, soy and timber, whilst the CDP supply chain helps us to understand the effect of climate change on supply chains. The Tesco group rejects all foods produced from deforestation in its stores.

Position of Tesco on Different Sustainability Practices

Tesco has adopted an overarching Environment Policy that guides all of its operations, including that of its subsidiaries and operations internationally. This policy frowns upon any undertaking that harms the environment and promotes actions that protect the natural environment. This Tesco policy outlines the way and manner, the company does its business nationally and internationally. The Tesco group has committed itself to reducing carbon footprints from its operations and works with its suppliers and partners to achieve same. Furthermore, Tesco seeks to become a net zero carbon business within the shortest possible time. Again, Tesco has committed itself to promoting sustainable food production that protects natural ecosystems. In the words of the leadership of this company it says “We are committed to ensuring that all our activities are genuinely sustainable and strive to care for the environment through any business activity that we undertake” [8]. Tesco has also stated emphatically on its website (www.tescopl.com) that it would be compliant to all environment laws and regulations of countries in which it operates. It has also stated that whenever there is a breach in any of these laws, immediate action would be taken to address them. Specific sustainability goals and initiatives the Tesco group has made include the following: -

- (i) Reduce greenhouse gas emissions in its operations by 1.5 degrees and 2.0 degrees in its supply chain.
- (ii) Seeks to eliminate food waste and reduce non-food waste in all its operations.
- (iii) Commits to sourcing its commodities such as beef, palm oil, soy and others from farms that have not been deforested.
- (iv) Encourages the adoption of biodiversity in all its operations

- and supply chains
- (v) Seeks to use recyclable materials and other materials that ensures food safety and have negligible effects on the natural environment.
- (vi) Reduce the quantity of water used in its entire operations and for food and clothing production, whilst ensuring that waste water from its operations do not pollute water bodies.
- (vii) It also prohibits its suppliers from trading in endangered species [8],

Tesco has partnered with WWF to make affordable, sustainable and healthy food available to everyone. The two have also jointly worked and published together a new report titled “Living Planet Report”, which has revealed that wildlife populations had declined averagely by 60 percent over the past fifty years [27]. Tesco is also part of the Champions 12.3 group that supports the Sustainable Development Goals of halving global food waste by 2030 [2]. Tesco uses a four-pronged approach to reducing food waste. These include (i) working with its suppliers to reduce food waste, (ii) Reducing food waste from its own operations, (iii) supporting poor communities with unsold food, and (iv) helping consumers to reduce food waste in their homes [2]. According to [2] as a result of the afore-mentioned initiatives, just 0.35 percent of food that it handled ended as waste in 2021/2022. This is no mean an achievement, given the amount of food that Tesco handles and sells.

Appropriateness of Different Sustainability Practices of Tesco

Tesco Group’s adoption of several sustainability practices in its operations and supply chain both nationally and internationally, including coming up with an overarching environment policy that guides its work is very appropriate and commendable. Furthermore, its decision to abide by the environment laws and regulations in all the countries that it operates is also worthy of emulation. Abiding by environment laws and regulations may entail additional cost to the company and this is where we see the corporate social and environmental responsibility of Tesco. Tesco’s operations are vast and they invariably lead to the emission of greenhouse gases, which cause climate change and climate variability [28]. The adverse effects of climate change are seen in floods, droughts and other inclement weather conditions that affects humans and their properties. Tesco’s decision therefore to implement several sustainability practices within its supply chain would contribute to ameliorating the adverse effects of greenhouse gases to the natural environment and human beings. Tesco’s decision also to apply its sustainability principles to all the suppliers in its supply chain underscores the company’s seriousness about contributing to addressing climate change in the world. Suppliers may not be part of a company and they are at liberty to either accept or reject sustainability principles. When suppliers reject a company policy, it may require the parent company to look for another supply, which take time and money to secure one.

As a food retailer, Tesco decision to source food produced sustainably and reduce food waste to the barest minimum is worthy of praise. According to the Food and Agriculture Organization (FAO) of the United Nations, about 1.3 billion tonnes of food are wasted every year at a great expense to farmers and food traders. By working with food suppliers, consumers, poor communities and other partners as well as from its own operations, Tesco has been able to reduce the amount of food wasted drastically (just 0.35 percent got wasted in 2021/22). This is a commendable feat. Tesco has also recognized that by its own efforts alone, it cannot do much and is partnering with others to apply sustainability principles in the supply chain. Its decision therefore to join the

Champions 12.3 group that supports the Sustainable Development Goals [2] of halving global food waste by 2030 is in the right direction. Tesco's partnership with WWF on food and endangered species is a worthy cause that must be supported by all. It is also pertinent to stress that all the efforts on sustainability is being championed by the top management of the Tesco Group. Many sustainability practices do not see the light of the day because they do not have the blessings of top management. Not so with Tesco. The impact Tesco is making globally is because it has the backing of its top management.

Evaluation of Sustainability and the Implications of Implementing Sustainability Practices at Tesco

The implementation of sustainability practices at Tesco has been a resounding success. For example, Tesco has been able to record just 0.35 percent of the food it handled and sold that became waste in 2021/2022. This is a no mean achievement given that some retailers in developing countries such as South Africa can lose as much as 95 percent of the food it retails in its supply chain [29]. The Tesco Group's sales increased by 2.5 percent to 54.8 billion pounds sterling in 2021/22, whilst its profit grew by 65.5 percent [2]. The success of Tesco can be attributed to having a right governing structure (Corporate Responsible Committee led by the Group Chief Executive Officer) in place, securing the services and advice of a Sustainability Consulting firm called Antithesis and the partnerships it forged with the Champions 12.3, Poor Communities and WWF, among others.

The business-related implications of implementing sustainability practices at Tesco are that the reputation and brand value of Tesco have increased. Its efforts to cut down food waste by feeding poor communities with their unsold food has increased its corporate social responsibility. Its work with WWF to protect critically endangered species has shown how caring the company is. All these initiatives, brought more business to Tesco as well as being perceived highly by the general public, which would turn them into loyal and repeat customers of the company. Indeed, Tesco has become the shining example and a market leader in sustainability in supply chains in the retailing sector in the United Kingdom and Central Europe. It is also teaching its numerous customers how to live sustainably and make savings by minimising to the barest minimum the amount of food that is allowed to go to waste in households, particularly in the United Kingdom. It is also supporting communities with food, donations and community grants.

Conclusion

This paper has shown beyond doubt the relevance, key dimensions, drivers, barriers, performance measurements and reporting of sustainability practices in the supply chain. Using the Tesco Group as a case study, it has also shown the existing position, the appropriateness and business-related implications of different sustainability practices implemented in this company and concluded with the position that the practice of sustainability in one's supply chain is good for business and it has benefitted Tesco immensely. Indeed, the Tesco Group has become a role model in sustainability in the food sector and is leading the way for other companies in the grocery retailing business in the United Kingdom, Central Europe and beyond to follow suit.

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